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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,322	Applicant(s) ANDO ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25, 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/8/08</u> . | 6) <input type="checkbox"/> Other: _____ |

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This action is in response to applicants' amendment of 11 February 2009. The amendments to the specification have overcome the objection to the disclosure. The amendments to the claims have overcome the objections over claims 4,6,10 and 23; the 35 USC 112 rejection over claim 1, and the art rejections over U.S. patents 3,226,183; 3,974,108; 5,057,492; 5,851,507; 5,096,880; 5,106,828; 3,550,033; 3,725,811; 3,956,170 and 4,988,402; the article by Kim et al and JP 07-286171. The amendments to the claims have also overcome the 35 USC 103(a) rejection based on JP 2002-129154 and the 35 USC 102(b) rejection over claims 1, 4-9, 12 and 26 over JP 2002-129154. The provided translation has perfected applicants' filing date and thus the effective filing date of this application is 30 October 2003. Thus the rejection over U.S. patent 7,016,094 is withdrawn. Applicant's arguments with respect to the remaining 35 USC 112 rejection have been fully considered but they are not persuasive.

From the wording of claims 1-4, it is clear that the materials of claim 14 are not doped.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 14-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

U.S. patents 7,016,094 raises the question of enablement with respect to the claimed element of claims 14-24, when the material has the general formula RMnO_3 , where R is at least one rare earth element. This reference teaches elements having the same structure as that claimed do not exhibit electroluminescence in column 5, lines 30-36. U.S. patent application publication

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2006/0261329 teaches an electroluminescent device and it teaches materials having the general formula RMnO_3 , where R is at least one rare earth element are electrodes are not luminescent. Page 15, lines 11-19 of the specification teach that undoped YAlO_3 is not electroluminescent, which raises the question if all materials having the general formula RAlO_3 , where R is a rare earth element is electroluminescent since all these aluminate have similar electrical properties. Thus it appears two fifth, or 40%, of the claimed embodiments are not functional and thus are not enabled since it would take undue experimentation to determine which of the claimed embodiments are operable when the material has the general formula is RMnO_3 or RAlO_3 . It is noted that the only materials that fall within the scope of claim 14 which applicants clearly identify as electroluminescent are R_2CuO_4 and $\text{RZ}_2\text{Cu}_3\text{O}_6$ (pg. 15, lines 20-27 and pg. 20, lines 21-24). It does not clearly identify any undoped rare earth aluminate, rare earth manganate or rare earth chromate as electroluminescent. It only clearly identify doped rare earth aluminates as electroluminescent.

Applicants' arguments with respect to this rejection have been considered but are not convincing. The above enablement rejection is proper when the claims read upon a significant number of inoperative embodiments. See MPEP 2164.08(b). With respect to the teaching in US '094, the cited section teaches that the optical changes in rare earth manganate in electroluminescent devices are different from electroluminescence. The citation of page 3, lines 22-24 was a typographical error and should have been page 15, lines 11-19 and it was referring to applicants own specification. This has been corrected above. Applicants' arguments with respect to the effective filing date are noted but are moot since prior art rejections were never made over U.S. patent application publication 2006/0261329 and U.S. patents 7,016,094.

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Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002-129154.

The translation for this reference teaches Sr or Ba doped lanthanum aluminate having the formula RAlO_3 . These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The reference teaches the claimed material.

Claims 1, 5, 8, 12 and 28 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent application publication 2002/0022568.

Paragraph [0057] teaches $\text{Gd}_{0.9}\text{Na}_{0.1}\text{MnO}_3$. This compound is identical to that claimed and therefore it must inherently be electroluminescent. The reference teaches the claimed material.

Claims 1, 5, 8 and 28 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent application publication 2002/0022568.

This reference teaches $\text{La}_{1-x}\text{K}_x\text{MnO}_3$, where $0.05 < x < 1$. Paragraph [0047] teaches $\text{La}_{0.7}\text{K}_{0.3}\text{MnO}_3$. These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The reference teaches the claimed material.

Claims 1, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent application publication 2002/0022568.

This reference teaches $\text{La}_{1-x}\text{K}_x\text{MnO}_3$, where $0.05 < x < 1$. This x range overlaps the range of claim 12. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Also see MPEP 2144.05. One of ordinary skill in the art would expect

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the taught compounds to be electroluminescent, since the taught compounds are identical to that claimed. The reference suggests the claimed material.

Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent application publication 2004/0028954.

Paragraph [0025] teaches Y_2CuO_4 and Nd_2CuO_4 . These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The reference teaches the claimed material.

Claims 2 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent application publication 2002/0034644.

Table 6 teaches Nd_2CuO_4 . The reference teaches that the pigments have a crystal structure similar to $\text{La}_{0.6}\text{Ca}_{0.4}\text{MnO}_3$ and thus indicates that $\text{La}_{0.6}\text{Ca}_{0.4}\text{MnO}_3$ was known as to 21 March 2002. These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The reference teaches the claimed material.

Claims 2, 4, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,055,436.

This reference teaches $(\text{Ln}_{1-x}\text{M}_x)_2\text{CuO}_4$, where $0 < x \leq 0.1$, M is at least one of Ba, Sr or Ca and Ln is at least one lanthanide, which includes Nd. Thus the reference suggests $(\text{Nd}_{1-x}\text{M}_x)_2\text{CuO}_4$, where $0 < x \leq 0.1$ and M is at least one of Ba, Sr or Ca. The x range overlaps the range of claim 10. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Also see MPEP 2144.05. One of ordinary skill in the

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art would expect the taught compounds to be electroluminescent, since the taught compounds are identical to that claimed. The reference suggests the claimed material.

Claims 2, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by the Bourne article.

This reference teaches $Y_{1.2}Ba_{0.8}CuO_4$. This compound is identical to that claimed and therefore it must inherently be electroluminescent. The reference teaches the claimed material.

Claims 2, 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Bourne article.

As stated above, this article teaches $Y_{2-x}Ba_xCuO_4$, where x is 0-0.9. The x range overlaps the range of claim 10. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Also see MPEP 2144.05. One of ordinary skill in the art would expect the taught compounds to be electroluminescent, since the taught compounds are identical to that claimed. The reference suggests the claimed material.

Claims 2, 4, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 63-22559.

The abstracts and the tables in this reference teaches $(Ln_{1-x}M_x)_2CuO_4$, where x is 0-1, M is Mg, Ba, Sr or Ca and Ln can be Y or Nd. Table 3 teaches $(Nd_{0.7}Ba_{0.3})_2CuO_4$. Table 2 teaches $(Y_{0.7}M_{0.3})_2CuO_4$, where M is Mg, Ca, Sr or Ba. These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The reference teaches the claimed material.

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Claims 2, 4, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-22559.

As stated above, this reference teaches $\text{Ln}_{1-x}\text{M}_x)_2\text{CuO}_4$, where x is 0-1, M is Mg, Ba, Sr or Ca and Ln can be Y or Nd.. The x range overlaps the range of claims 10 and 11. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Also see MPEP 2144.05. One of ordinary skill in the art would expect the taught compounds to be electroluminescent, since the taught compounds are identical to that claimed. The reference suggests the claimed material.

Claims 3, 5 and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by the Lin et al article or the Janossy article.

The Lin article teaches $\text{Y}_{0.7}\text{Ca}_{0.3}\text{Ba}_2\text{Cu}_3\text{O}_6$. The Janossy article teaches $(\text{Gd},\text{Y})_{1-x}\text{Ca}_x\text{Ba}_2\text{Cu}_3\text{O}_6$, where x is about 0.008. These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The references teach the claimed material.

Claims 3, 5, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by the Gruninger article.

This article teaches $\text{YBa}_2\text{Cu}_{3-y}\text{Zn}_y\text{O}_6$, where y is 0.05-0.07, or 5-7 mol%. These compounds are identical to that claimed and therefore they must inherently be electroluminescent. The references teach the claimed material.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
April 27, 2009

/C. Melissa Koslow/
Primary Examiner
Art Unit 1793